

Title: "Programmable beam shaping for high power laser systems"

Abstract:

Laser beam uniformity is important in reducing laser induced damage probability while maintaining high energy extraction efficiency of a laser system. We demonstrate a programmable beam shaping system which can control beam shape as well as wavefront to a specified objective. Challenges and the respective solutions in implementing such a system in a complex laser system are discussed.

Bio:

Seung-Whan Bahk is a research scientist at the Laboratory for Laser Energetics, University of Rochester. He received a Bachelor's degree in Electrical Engineering from Han-Yang University and a Ph.D. in Optics/EE from the University of Michigan on optimizing high peak-power ultrashort laser focus using adaptive optics. He has been contributing to the field of ultrashort high power lasers, wavefront sensing, and laser beam shaping. The high precision laser beam shaping system he developed has become a valuable tool at LLE. Dr. Bahk has also been working on new wavefront sensing methods and reconstruction algorithms, spatiotemporal control and characterization of ultrashort pulses. He is a senior member of OSA.